Man in a Cold Environment: Physiological and Pathological Effects of Exposure to Low Temperatures. By Alan C. Burton, Ph.D., and Otto G. Edholm, M.B., B.S. (Pp. xiv + 273; illustrated. 30s.) London: Edward Arnold (Publishers) Ltd. 1955.

This monograph was originally commissioned by the Defence Research Board of Canada presumably with the object of providing those concerned with the care and protection of military personnel with a convenient compendium on the effects and dangers of a cold environment. The monograph, of course, goes much farther than this and will appeal to a wider public.

It is concerned with the relationship of homeotherms, and in particular man, to the laws of thermodynamics. The declared aim of the authors is the presentation of a unified and consistent scheme for the evaluation of the problems of man in a cold enviroment. To this end Burton and Edholm and other workers in this field have created what is practically a new subdivision of biology in that it has a jargon peculiar to itself, a courageous if as yet incomplete mathematical theory and a new derived unit of measurement, the "Clo" unit of thermal insulation. This monograph provides a practically painless introduction for the novice to the new science. The opening chapters are concerned with the purely physical and then physiological aspects of the problem; then follows a description and discussion of the various biological and artificial mechanisms developed by man to preserve constant the temperature of his "milieu intérieur". The final chapters are devoted to a consideration of the consequences resulting from failure to maintain this temperature. The subjects discussed range from the paradoxical disentropic behaviour of living cells to the cause and treatment of "Immersion Foot".

The authors' style is pleasant and lucid and the reviewer has found little to criticize on that score. As a clinician, however, he would have appreciated a further chapter dealing specifically with the reaction of the diseased subject to the temperature of his environment. Having experienced the immediate warming effect of the consumption of a block of chocolate in a sub-arctic environment the reviewer remains unconvinced that the specific dynamic action of food is of no importance in protection against cold.

There is in this monograph much of direct interest to the physiologist and the pathologist. The medical practitioner will find within it advice on the proper treatment of the casualty apparently frozen to death and it should be compulsory reading for those who practise that new, and as yet dangerous, therapeutic procedure, the induction of hypothermia.

A Manual of Anæsthetic Techniques. By William J. Pryor, M.B., Ch.B.N.Z., F.F.A. R.C.S. Eng., D.A.Eng., M.F.A., R.A.C.S. (Pp. x + 224; illustrated. 27s. 6d.) Bristol: John Wright & Sons Ltd. 1956.

Anæsthesia is predominantly a practical art, though, of course, a sound knowledge of pharmacology and the basic sciences is essential to its proper understanding and practice.

The author of this small book is concerned with this practical aspect, and his purpose is to provide, for junior trainees in the specialty, a vade-mecum where the answers may be found to the practical problems which arise in the day-to-day administration of anæsthetics.

The essentials of pre- and post-operative care are described together with detailed accounts of anæsthetic techniques suitable for most operations. Resuscitation is discussed, and the emergencies that may arise during the administration of an anæsthetic.

The risks of over-simplification have been largely avoided, in spite of the didactic style inevitable where much theoretical discussion has been deliberately omitted; and this work is not unsuccessful in fulfilling its author's intention. A minor fault is the haphazard use of pharmacological and proprietary names for drugs.

Biochemistry of the Eye. By Antoinette Pirie, M.A., Ph.D., and Ruth Van Heyningen, M.A., D.Phil. (Pp. viii + 323; illustrated. 35s.) Oxford: Blackwell Scientific Publications. 1956.

The object of this book is twofold; to interest biochemists in using the tissues of the eye for experimental purposes and to aid ophthalmologists in understanding the principles of ocular physiology and the biochemical aspects of pathological conditions. Certainly to the ophthalmologist this book fulfils its purpose admirably. The subject matter, ranging from the metabolism of ocular tissues to the ocular effects of nutritional diseases, includes chapters on the chemistry of vision, the vitreous body and, to a lesser extent, the aqueous humour. The first third of the book is concerned with the lens, and like the rest of the material is presented so clearly and interestingly that the rather formidable metabolic cycles are not too indigestible to an unchemically-minded reader. The chapter on experimental cataract is particularly interesting and serves to emphasize how much more work is required before the mechanism of senile cataract or its treatment by medical means is discovered. The metabolism of the cornea is well described and is of especial importance since corneal grafting has become a routine operative procedure. The response of the cornea to injury is also discussed.